

# PATENT ABSTRACTS OF JAPAN

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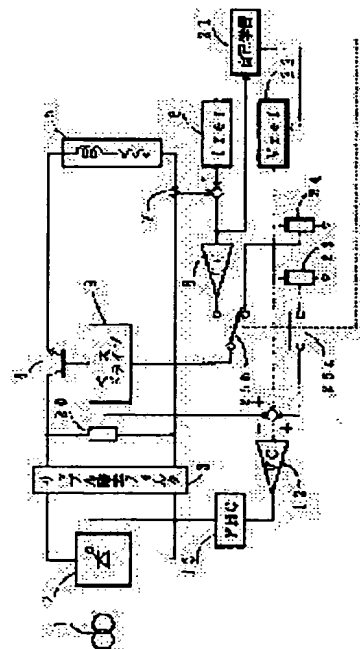
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## (54) SYNCHROTRON ELECTRIC POWER SUPPLY DEVICE

### (57)Abstract:

**PURPOSE:** To provide an electric power supply device by which highly accurate electric current control can be secured even in a accelerating-accumulating mode by applying a series transistor to synchrotron electric power supply, and enabling the highly accurate electric current control in a synchrotron electric power supply device to accelerate or accelerate-accumulate an electron beam or the like at high speed.

**CONSTITUTION:** In a synchrotron electric power supply device constituting a main circuit of a thyristor converter 2, a ripple removing filter 3 and a series transistor 4, the device has reference signal generating means 6 and 22 to give a pattern voltage reference signal  $V_{ref}$  to the thyristor converter 2 as well as to give a pattern electric current reference signal  $I_{ref}$  to the series transistor 3 and a self-learning device 21 to correct the pattern voltage reference signal so that electric current deviation between an output electric current flowing to a load 5 and the pattern electric current reference signal becomes small. After the electric current deviation is converged within prescribed range, the series transistor is controlled by the pattern electric current reference signal.



## LEGAL STATUS

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